

**Sam Crum Water Well Drilling, Inc.**

**Lic. #593583**

**P.O. Box 577 Hemet, CA 92546-0577**

**Ph: (951) 658-8805 Fax: (951) 929-7321**

George Markel  
25455 Via Estudio  
Laguna Niguel, CA 92677

Property Location:  
Off Bennett Road  
Desert Hot Springs, CA

LOT #	APN #	RIVERSIDE CO. PERMIT #	GEOHERMAL PERMIT #	WELL DEPTH	SEAL DEPTH	WATER TEMPERATURE
12	659-100-012	30141N.A.		380'	50'	120°+
8	659-100-008	31571N.A.		380'	50'	120°+
5	659-100-005	32747	065-90237	380'	20'	120°+
9	659-100-009	32749	065-90238	380'	20'	120°+
15	659-100-015	32746	065-90236	380'	20'	120°+
17	659-100-017	32448	065-90235	380'	20'	120°+
33	659-100-033	32783	065-90239	380'	20'	130°+

RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF CONSERVATION  
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No.PG207-17  
DISTRICT G2

**REPORT ON PROPOSED GEOTHERMAL OPERATIONS**

George Markel, Agent  
George Markel  
25455 Via Estudio  
Desert Hot Springs, CA 92677

El Centro, Calif.  
May 18, 2007

Your supplementary proposal to drill well "Markel" 53, API No.065-90237, Section 13,T.03S, R.05E, S.B.B.& M., Desert Hot Springs field, \_\_\_\_\_ Geothermal Resource Area, Riverside County, dated 05-17-2007, received 05-18-2007, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. The 6" casing shall be cemented from 20 feet to the surface.
2. In all other respects the well shall be drilled in accordance with permit No. PG207-08, dated April 24, 2007.

NOTE:

1. Call the office of the Division of Oil, Gas, & Geothermal Resources for field engineer. (760) 353-9900(24 hours).
2. Geothermal water discharge is regulated by the California Regional Water Quality Control Board (CRWQCB), Colorado River Region. The CRWQCB should be contacted concerning requirements and permits regarding geothermal water disposal at (760) 346-7491.
3. The proposed well's location is on lot 5 of a property east of Bennett Road approximately 0.8 miles south of Dillon Road.
4. This well is proposed to supply hot water to a pool/spa at the property on Bennett Road.

cc: Sacramento Geothermal Unit  
Calif. Regional Water Quality Control Board  
Riverside County Health Department  
Mission Springs Water District  
Coachella County Water District

Hal Bopp  
State Oil and Gas Supervisor

By Michael L. Woods  
Michael L. Woods  
District Geothermal Engineer

Digitally signed by Michael L. Woods  
DN: cn = Michael L. Woods, c = US, o = DOGGR, ou  
= District G2  
Date: 2007.05.18.10:10:15 -0700

*A copy of this report and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after completion, suspension, or abandonment.*  
OGG111

RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF CONSERVATION  
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

API Well Number 065-90237

NOTICE OF INTENTION TO REWORK/SUPPLEMENTARY  
GEOTHERMAL WELL

Submitted in compliance with Section 3724, Division 3, Chapter 4, Public Resources Code

Operator <u>GEORGE MARKEL</u>		Well Designation <u>MARKEL 53</u>					
Field <u>BENNETT RD/ DESERT HOT SPR</u>		County <u>RIVERSIDE</u>	Sec <u>13</u>	T. <u>3S</u>	R. <u>5E</u>	B.&M. <u>6-B</u>	
Name (Person submitting notice) <u>SAM CROWM</u>		Street Address <u>25455 VIA ESTUDIO</u>					
Title (Agent or officer of company) <u>SAM CROWM DRILLING</u>		City <u>LAGUNA NIGEL</u>		State <u>CA</u>		Zip Code <u>92677</u>	

Signature [Signature] Date MAY 17-07

Telephone 951-658-8805 Fax 951-929-7321 E-mail SCDRILLING@EARTHLINK

1. The complete casing record of the well (present hole), including plugs and perforations, is as follows:  
0-20' SANITARY SEAL w/ 10 SACK CEMENT 6" STEEL  
0-280' 6" STEEL CASING BLANK / 280' 380' SCREEN .256 WALL
2. The total depth is: 380' feet. The effective depth is: 380' feet.
3. Present completion zone(s): \_\_\_\_\_ (Name) Anticipated completion one: \_\_\_\_\_ (Name)
4. Present zone pressure and temperature: \_\_\_\_\_ (psi or °F) Anticipated new zone pressure and temperature: \_\_\_\_\_ (psi or °F)
5. Last produced: \_\_\_\_\_ (Date) \_\_\_\_\_ (Rate)
- (or)
- Last injected: \_\_\_\_\_ (Date) \_\_\_\_\_ (Rate) \_\_\_\_\_ (Surface pressure, psig)

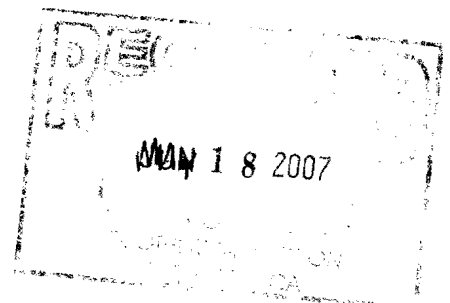
The proposed work is as follows: (A complete program is preferred and may be attached.)

For redrilling or deepening: \_\_\_\_\_ (Proposed bottom-hole coordinates) \_\_\_\_\_ (Estimated true vertical depth)

The Division must be notified if changes to this plan become necessary.

File this notice in duplicate.

OGG107 (3/07)



RESOURCES AGENCY OF CALIFORNIA  
DEPARTMENT OF CONSERVATION  
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

No. PG207-08  
DISTRICT G2

REPORT ON PROPOSED GEOTHERMAL OPERATIONS

George Markel, Agent  
George Markel  
25455 Via Estudio  
Desert Hot Springs, CA 92677

El Centro, Calif.  
April 24, 2007

Your \_\_\_\_\_ proposal to drill well "Markel" 53, API No. 065-90237, Section 13, T. 03S, R. 05E, S.B.B. & M., Desert Hot Springs field, \_\_\_\_\_ Geothermal Resource Area, Riverside County, dated 03-27-2007, received 04-05-2007, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

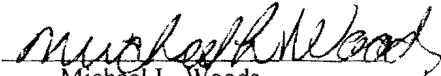
1. A drilling log and core record, well history and summary are filed within 60 days after completion.
2. The 6" casing shall be cemented from 50 feet to the surface.
3. Surface facilities such as well pad or well vault must conform to the Riverside County Health Dept. requirements.
4. A permit is required by the Riverside County Planning Department to construct this well.
5. **THIS DIVISION SHALL BE NOTIFIED:**
  - a. One day prior to the commencement of drilling.
  - b. To witness the cementing of the 6" casing.

NOTE:

1. Call the office of the Division of Oil, Gas, & Geothermal Resources for field engineer. (760) 353-9900 (24 hours).
2. Geothermal water discharge is regulated by the California Regional Water Quality Control Board (CRWQCB), Colorado River Region. The CRWQCB should be contacted concerning requirements and permits regarding geothermal water disposal at (760) 346-7491.
3. The proposed well's location is on lot 5 of a property east of Bennett Road approximately 0.8 miles south of Dillon Road.
4. This well is proposed to supply hot water to a pool/spa at the property on Bennett Road.

cc: Sacramento Geothermal Unit  
Calif. Regional Water Quality Control Board  
Riverside County Health Department  
Mission Springs Water District  
Coachella County Water District

Hal Bopp  
State Oil and Gas Supervisor

By   
Michael L. Woods  
District Geothermal Engineer

*A copy of this report and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after completion, suspension, or abandonment.*

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# NOTICE OF INTENTION TO DRILL A GEOTHERMAL RESOURCES WELL

(Submit in duplicate)

Operator <u>George Markel</u>	Well Designation # <u>S3-005</u>	<u>Markel 53</u>		
Field or GRA <u>Desert Hot Springs</u>	County <u>Riverside</u>	Sec. <u>18</u>	T. <u>3S</u>	R. <u>5E</u> B. & M.
Name (Person submitting report) <u>Sam Crum</u>	Street Address <u>25455 Via Estudio</u>			
Title (Agent or officer of company)	City <u>Laquena Nigel</u>	State <u>CA</u>	Zip Code <u>92679</u>	

Signature [Signature] Date 3-27-07 Telephone Number (951) 658-8805

The appropriate drilling fee, an indemnity or cash bond, a complete drilling program, and a parcel map showing the operator's surface rights, mineral rights, and the location of the proposed well must accompany this notice.

Location of well: 50' meters E along section/property line, and 50' meters S at right angles to said line  
(Direction) (Cross out one) (Direction)

from the NW corner of section/property Lot 005 or \_\_\_\_\_  
(Cross out one)

Elevation of prepared site above/below sea level: \_\_\_\_\_ meters.

☒ yes ☐ no

Is the surface location or intended production interval within 100 feet of property boundary?

If well is to be directionally drilled, show proposed coordinates (from surface location) at total depth:

\_\_\_\_\_ meters \_\_\_\_\_ and \_\_\_\_\_ meters \_\_\_\_\_  
(Direction) (Direction)

## PROPOSED CASING PROGRAM

All depth measurements taken from top of rotary table that is 5' meters above ground.  
(Derrick Floor, Rotary Table, or Kelly Bushing)

SIZE OF CASING CH API	WEIGHT (Kg)	GRADE AND TYPE	NEW OR USED	TOP OF CASING (m)	SIZE OF HOLE (cm)	VOLUME OF CEMENT
(m3)	CEMENTING DEPTHS	CALCULATED FILL BEHIND CASING				
<u>6"</u>		<u>Steel</u>	<u>New</u>		<u>12"</u>	

Intended zone(s) of completion: \_\_\_\_\_ Estimated total depth: 400' meters.  
(Name, depth, and expected pressure)

## ENVIRONMENTAL INFORMATION

(See reverse side)

If a governmental agency has prepared an environmental document, please submit a copy of the document with this notice or supply the following information:

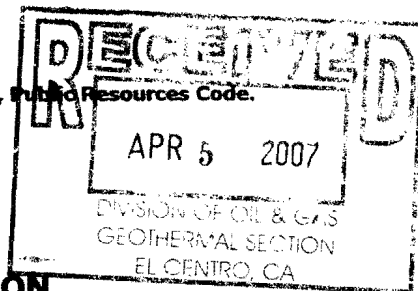
Governmental Agency: \_\_\_\_\_ Contact Person: \_\_\_\_\_

Address: \_\_\_\_\_ Phone: \_\_\_\_\_

Document title: \_\_\_\_\_ S.C.H. No.: \_\_\_\_\_

Submitted in compliance with Section 3724, Division 3, Chapter 4, Public Resources Code.

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## ENVIRONMENTAL INFORMATION

The California Environmental Quality Act (CEQA) applies to the project described in the information on the front